

# ECONOMIC GROWTH AND NATURAL RESOURCE PROTECTION: HOW LONG CAN WE HAVE BOTH?

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**Abstract.** Since colonial times, Americans have taken abundant natural resources mostly for granted. Virgin timber, wildlife, minerals, fertile soils and clean water, coupled with a free market system, provided the basis for a vibrant economy during the early years of nationhood. A vast expanse of undeveloped land and the freedoms guaranteed by a new system of government provided apparently endless opportunities. Growth and prosperity became synonymous in the minds of most Americans, and it remains so today in spite of vastly different conditions. Georgia's natural resources face ever-growing pressures that are directly related to human population density and a consumption-based society, but government leaders continue to promote growth as a goal and a measure of success. It is time for leaders to embrace the sustainability concept and understand the resource constraints to unlimited growth.

## INTRODUCTION

The standard of living enjoyed by most Americans belies growing economic and resource problems that elected officials are failing to solve. This high living standard is supported in large part by growing government, corporate and personal debt. Many economic and resource problems are made more difficult by longstanding paradigms that equate growth with "progress", and the very yardsticks used to measure success, (gross domestic product growth or gross tax revenue, for example) are questionable.

In the United States, politicians pay lip service to the looming specter of national bankruptcy, but lack the collective will to alienate an electorate grown complacent by entitlements. Demands for property rights and job creation countermand government's public trust responsibilities for resource protection. As population pressures continue to degrade both social and ecological systems, sustainability is arguably the central environmental and social issue facing society. The question of how long we can have a growing

economy and natural resource protection is clearly not just an academic one.

The purpose of this paper is to raise some questions that resource managers and policy makers alike must begin to consider more seriously than ever. Is Georgia's resource base capable of supporting unlimited economic growth? Can ecological principles be given sufficient status in the decision making process when gross measures of economic activity are the overriding concern? Should government continue to promote growth as an end in itself without being accountable to define the ultimate goal of such policy? Ever-growing and conflicting demands on water resources make such questions especially relevant to resource managers. Although this paper deviates from the typical research topic, its message is essential in the context of our times.

## BACKGROUND

Our nation was born in an ecosystem virtually unimpacted by past civilizations. Our system of government was founded on such noble principles as individual freedom, the value of work, and the right to own private property. Many of our nation's first citizens personally experienced severe forms of hardship and oppression. They were people from all walks of life who shared a common desire for an equal opportunity to make their own way without undue interference from government. Against overwhelming odds, they won the right to govern themselves as they saw fit.

Those early Americans took the abundant natural resources for granted. They rightly saw those resources as essential to their survival, and also as means to support commerce and trade. Relatively unrestrained access to new land made opportunities seem endless. A vibrant economy soon flourished as virgin timber was harvested or cleared to make room for crops, water was harnessed to move commodities and to grind grain, and wildlife populations were exploited for sustenance or for the market. The

"invisible hand" described by Scottish philosopher and economist Adam Smith (1776) was clearly at work.

The industrial revolution brought about changes that greatly increased man's ability to exploit resources and "grow" the economy. It allowed and encouraged a shift from a dominantly rural lifestyle to a more urban one. As communities grew into cities, living standards for many people rose accordingly. People began to see this ever-growing population and economy as "progress" toward some undefined but noble goal.

The economic hardships of the Great Depression demanded leadership to get the country back on track. The Federal government responded with massive social programs to create jobs and help those who could not help themselves. World War II provided full employment, further developed the nation's industrial might, and united citizens in an all-out effort to preserve their way of life.

After the war, the industrial giant was focused on meeting the pent-up demand for consumer goods. Great advances in medicine and nutrition decimated human mortality rates and expanded life expectancy. The economy once again flourished, although not all citizens prospered. Racial prejudice, inadequate education and poverty kept many from achieving the "American dream," but unlike during the nation's formative years, America was out of frontiers to harbor the downtrodden.

While America's population and economy were growing by leaps and bounds, the character of her supporting ecosystem was rapidly changing. She lost most of her free-flowing rivers to impoundment and diversion, along with the anadromous fish they supported. Many species of stream fishes and native mussels declined or disappeared. Populations of game animals were decimated. Virgin forests were reduced to a fraction of their former magnitude. Exotic species displaced or destroyed many native ones. Air and water pollution became widespread.

Hunters and fishermen demanded and paid for government programs to restore game and fish populations where suitable habitat persisted. In 1962, Rachael Carson's *Silent Spring* sounded a wake-up call that kindled public demand for Federal environmental cleanup and control of toxicants. Wildlife habitat loss continued, however, replaced by the trappings of human "progress." For those who enjoyed resource-based outdoor recreation, demand began to exceed supply.

Responding to cries for social justice and a clean environment, the Federal government began massive programs. America was the world's largest creditor nation, and its citizens perceived her wealthy enough to provide a "safety net" for everyone. Immigrants continued to arrive in record numbers to seek refuge from stagnate economies

and political repression. To pay for expanded entitlement programs, environmental cleanup and massive commitments to worldwide interests, the nation quietly increased its deficit spending, demonetized its currency, and set a course toward becoming the world's largest debtor.

The debt-based economy flourished as consumers were encouraged to buy now and pay later. Local governments discovered that "economic growth" was the key to paying for today's programs with tomorrow's dollars. Influential citizens urged government to use public funds to lure new industry to create jobs and generate wealth. Government growth subsidies encouraged land speculation and provided many citizens the opportunity to "cash in" on land prices driven far beyond their value to produce traditional products.

## DISCUSSION

Growth in products, money supply, population, and debt fuels a marvelous engine that citizens have been conditioned to believe is vital to their survival. The system has worked so well that the words "growth" and "progress" are used synonymously. Growth means higher incomes, more tax revenue, more roads, more of everything! Who would dare challenge such a marvelous system that seems to have no upper limit of benefits for all?

In fact, the system is being challenged by a growing number of people, including ecologists, conservation biologists, social justice advocates, and ordinary citizens who are often labeled "environmentalists". Even some economists are challenging classic economic theory, which recognizes no inherent limits to the scale of the macroeconomy. In spite of such challenges, however, official economic policy usually ignores the environment and the notion that economic growth is somehow good for the environment remains widespread (Arrow et al. 1995).

The first question of philosophy is "What matters?" In order for the study of economics to be most valuable to society it should stress those aspects of economic behavior that matter the most (Goodwin 1995). The focus of economics must shift from the accumulation of wealth per se to the purpose of wealth. Natural resource managers, as well as scholars from other disciplines, must move more toward interdisciplinary teamwork. This is especially important for those who work for government agencies that have public trust responsibilities to maintain environmental quality.

Natural resource managers should realize better than most the importance of an interdisciplinary teamwork approach to problems solving. We can study problems of water quality and supply in minute detail, but if our science-

based recommendations are ignored by policy makers because of overriding economic issues, our work has little value. A paradigm shift is needed away from the vision of unlimited growth because such a vision is in fundamental conflict with the ecological perspective which sees scale and carrying capacity limits as central to the analysis of any biophysical process (Goodwin 1995).

There are those who hold to the notion that technology will enable growth to continue indefinitely by constantly finding better ways to make resources supply human needs more efficiently. Such a philosophy suggests that the concept of carrying capacity does not apply to the human race as it has been shown to apply to other species. Indeed, it would be meaningless to propose a single number for the carrying capacity of the earth (or for Georgia) because the consequences of human innovation and biological evolution are inherently unknowable, and capacity is contingent on technology, preferences, and the structure of production and consumption (Daly 1996).

Although precise carrying capacity remains elusive, there have been some attempts to put the scale of the human presence on the planet in perspective. Vitousek et al. (1986) calculated the total net terrestrial primary production of the biosphere being appropriated for human consumption at around 40%. Qutub (1995) used water in a case study to illustrate the questions that must be answered to determine how any natural resource constrains human population. In light of the fact that the earth's population is already approaching 6 billion, and on track to double in about 45 years, such studies present a sobering perspective.

## CONCLUSIONS

While the primary purposes of this paper are to raise important resource questions and encourage interdisciplinary efforts to effectively address them, I propose the following recommendations as most relevant to the future of Georgia's resource health.

1. *Serious discussion among state resource managers, leading economists and policy makers should begin immediately in an effort to identify consensus areas concerning growth and resource expectations. The work of Arrow et al. (1995) could serve as a model for such an effort.*
2. *Policy makers must become more cognizant of the inherent conflicts of interest between responsibilities to protect resource quality and policies that promote unlimited growth.*
3. *The concept of sustainability must be endorsed at the highest levels of government and a concerted effort made to develop, with much public input, a*

*realistic vision for Georgia's economic and ecologic future.*

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